Amendments to the Claims:

1.   (Currently Amended) An apparatus for the examination of forensic specimens comprising:

a forensic specimen selected from the group consisting of: ~~fingerprints,~~ gunshot residues, condom lubricants, multi-layer paint chips, fibers, ink samples, and thin layer chromatography plates;

a light source, for illuminating said specimen;

light gathering optics, for gathering light reflected, emitted, transmitted or scattered from said specimen;

an electronically tunable filter, for transmitting light of specific, selected wavelengths;

an image sensor for sensing an image, said image sensor having a predetermined number of pixels;

a computer, said computer being coupled to said electronically tunable filter and said image sensor; and

software, running on said computer for:

tuning said electronically tunable filter to a specific wavelength or a series of specific wavelengths; and

collecting and storing the intensity of said reflected, emitted, transmitted or scattered light at each of said pixels for each of said specific wavelengths to which said electronically tunable filter is tuned.

2.   (Original) The apparatus of claim 1 wherein said light source is incident to or transmissive with respect to said specimen.

3.   (Original) The apparatus of claim 2 wherein said light source emits light of a specific wavelength or range of wavelengths.

4.   (Original) The apparatus of claim 1 wherein said light gathering optics comprises a microscope lens.

5.   (Original) The apparatus of claim 1 wherein said light gathering optics comprises a macro lens.

6.   (Original) The apparatus of claim 1 wherein said electronically tunable filter comprises one or more liquid crystal tunable filters.

7.   (Original) The apparatus of claim 6 wherein the bandwidth of said liquid crystal tunable filter ranges from 5 cm^{-1} to 10 nm.

8.   (Original) The apparatus of claim 1 wherein said electronically tunable filter comprises an acousto-optical tunable filter.

9.   (Previously Presented) The apparatus of claim 1 wherein said image sensor is a two-dimensional imaging focal plane array.

10.   (Original) The apparatus of claim 9 wherein said image sensor is a charge coupled device.

11.   (Original) The apparatus of claim 9 wherein said image sensor is a gallium arsenide focal plane array detector.

12.　(Previously Presented)　The apparatus of claim 1 further comprising one or more mirrors for spatially directing said light reflected, emitted or scattered from said specimen.

13.　(Previously Presented)　The apparatus of claim 1 further comprising an optical train disposed between said light gathering optical and said electronically tunable filter for matching the spatial characteristics of said light reflected, emitted or scattered from said specimen to said electronically tunable filter.

14.　(Original)　The apparatus of claim 1 further comprising a display device for rendering images and graphical representations of said specimen.

15.　(Previously Presented)　The apparatus of claim 14 wherein said software further performs the function of composing an image for rendering on said display device, said image being composed of light reflected, emitted, transmitted or scattered from said specimen at a specific wavelength or a range of said one or more specific wavelengths to which said electronically tunable filter has been tuned.

16.　(Previously Presented)　The apparatus of claim 14 wherein said software further performs the function of composing a graphical representation of said forensic specimen for rendering on said display device, said graphical representation being a graph of intensity versus wavelength for a specific pixel or a grouping of a plurality of specific pixels.

17. – 40.　(Cancelled)

41.   (Currently Amended) An apparatus for the examination of forensic specimens comprising:

a forensic specimen selected from the group consisting of: ink, dyes, explosives, drugs, tapes, adhesives, pigments, photocopy toner, and laser printer toner;

a light source, for illuminating said specimen;

light gathering optics, for gathering light reflected, emitted, transmitted or scattered from said specimen;

an electronically tunable filter, for transmitting light of specific, selected wavelengths;

an image sensor for sensing an image, said image sensor having a predetermined number of pixels;

a computer, said computer being coupled to said electronically tunable filter and said image sensor; and

software, running on said computer for:

tuning said electronically tunable filter to a specific wavelength or a series of specific wavelengths; and

collecting and storing the intensity of said reflected, emitted, transmitted or scattered light at each of said pixels for each of said specific wavelengths to which said electronically tunable filter is tuned.

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42.   (Currently Amended) An apparatus for the examination of forensic specimens comprising:

a <u>forensic</u> specimen selected from the group consisting of: <u>fingerprints,</u> blood, semen, saliva, defense sprays, minerals, and stains;

a light source, for illuminating said specimen;

light gathering optics, for gathering light reflected, emitted, transmitted or scattered from said specimen;

an electronically tunable filter, for transmitting light of specific, selected wavelengths;

an image sensor for sensing an image, said image sensor having a predetermined number of pixels;

a computer, said computer being coupled to said electronically tunable filter and said image sensor; and

software, running on said computer for:

tuning said electronically tunable filter to a specific wavelength or a series of specific wavelengths; and

collecting and storing the intensity of said reflected, emitted, transmitted or scattered light at each of said pixels for each of said specific wavelengths to which said electronically tunable filter is tuned.

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